

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

FLASHES ON MALE INFERTILITY



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Definition : Couple infertility means inability to get conception after one year of regular unprotected sexual intercourse.

Male factor: accounts for 50% of couple infertility **30% alone & 20% in combination**

B-Causes of male infertility

- ❑ **Varicocele.**
- ❑ **Ejaculatory dysfunction.**
- ❑ **MAGI & stds.**
- ❑ **Congenital causes.**
- ❑ **Acquired causes.**
- ❑ **Environmental & gonadotoxins.**
- ❑ **Immunological causes.**
- ❑ **Testicular cancer.**
- ❑ **Idiopathic.**

B-Causes of male infertility

1-Varicocele





It is dilatation & tortiousity of Pampiniform plexus.

It is the most common cause of male infertility 30-40%.

There are 4 grads of varicocele size

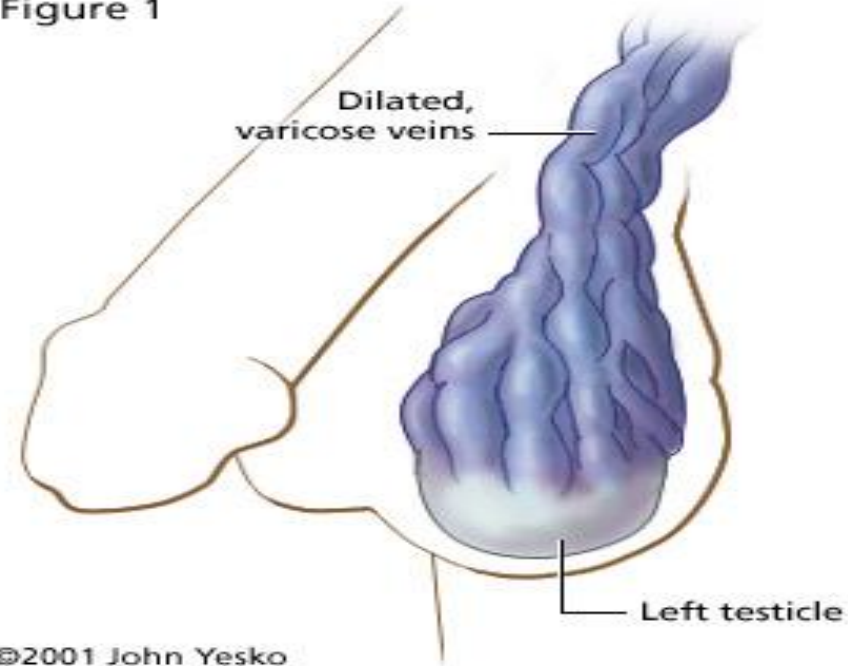
Figure 1

Grad 0 - Subclinical

Grad I - Detected only by vulsalva .

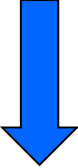
Grad II - By palpation.

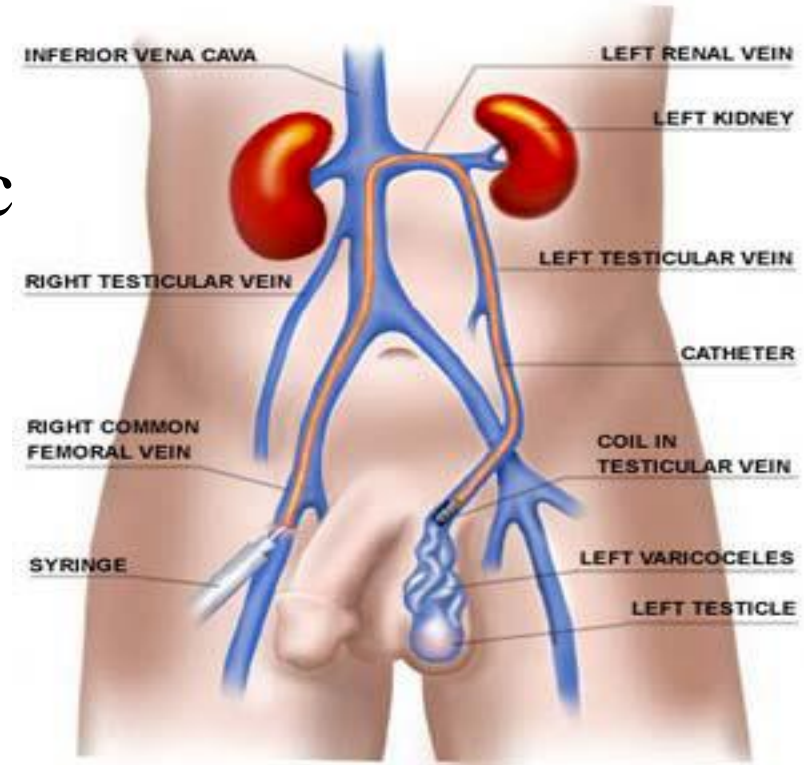
Grad III - Diagnosed by inspection.



- The size of varicocele correlates poorly with the degree of spermatogenic dysfunction.
- By time, varicocele deteriorate the testicular :
(size ,the spermatogenesis & hormonal functions)
- So the most common cause (70%) of 2ry male infertility is varicocele.

How Varicocele lead to male infertility?

- Testicular hyperthermia.
- Testicular hypoxia.
-  testosterone production
- Reflux of toxic metabolites from the suprarenal gland.



Causes of male infertility

2-Infection

It is a common cause of male infertility in Africa 12.2%.

Infection can affect fertility via:

- 1- Obstruction e.g. epididymoorchitis or T.B epididymitis.**
- 2- Destruction & fibrosis e.g. mumps orchitis.**
- 3- Disturbance of function e.g. prostatitis & seminal vesiculitis (85% of seminal plasma).**

Causes of male infertility

3-Congenital causes

Congenital abnormalities may affect the male reproductive system in different ways:

1- **Absent gonadal tissue**  Anorchia.

2- **Impaired sperm transport:**

- Epididymal malformation.
- Bilateral absent vas deference..

3- Impaired sperm production e.g.

- Hypogonadotrophic hypogonadism.
- Klinefelter syndrome.
- XX males.
- Sertoli cell only syndrome (SCO).

4-Acquired Causes

Causes of acquired testicular damage :

- Testicular torsion.
- Epididymo-orchitis
- Repeated testicular trauma.
- Chemotherapy & radiotherapy.
- Testicular cancers.



Causes of male infertility

5-Immunological causes

- Contribute to 4%-15% of male infertility.**
- Presence of anti-sperm antibody (ASA) on the surface of the sperm impairs the sperm's fertilizing capacity.

CAUSES of (ASA) formation :

- **Disruption of blood testes barrier(TB.)**
- **Varicocele**
- **Infection.**
- **Obstruction.**
- **Torsion.**

6-Gonadotoxins

- **Drugs:** Sulfasalazine, Nitrofuradantin, Cimetidine, and Antiandrogen.
- **Radiotherapy & cytotoxic agents and drugs.**
- **Occupational toxins** e.g. lead, arsenic, cadmium, & solvents, herbicides, insecticides, DDT.
- **Recreational drugs** e.g., Alcohol, Tobacco, Anabolic steroid, Opiates & Morphine.

Causes of male infertility

7-Testicular Cancers

-Carcinoma insitue (C I S) & testicular cancers are the commonest cancers in Adult males in the west.

C I S & testicular cancers can affect infertility via

- The malignant tissue replace & destruct the germinal t.**
- The chemotherapy & radiotherapy for the treatment of T.C. will affect the germinal tissue.**

8-Idiopathic Infertility

- **30 % - 40% of infertile males are idiopathic with no clear cause.**
- **Diagnosis is done by exclusion.**

Treatment of male infertility

1. General advices
2. Treatment of the cause.
3. Emperical treatment.
4. Surgical treatment.
5. ART.

C-Treatment of male infertility

5-ART (Assisted Reproductive Techniques)

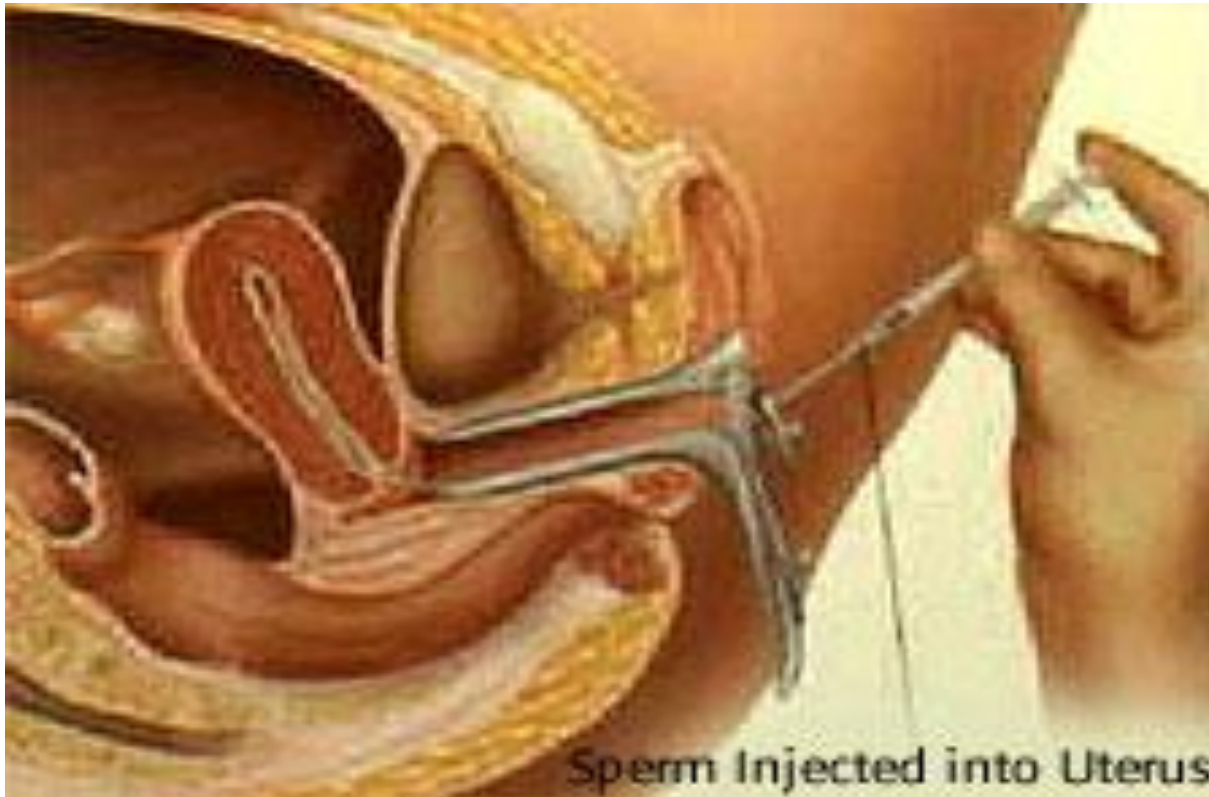
Are used to overcome males & females factors of infertility

1- IUI.

2- IVF.

3- ICSI.

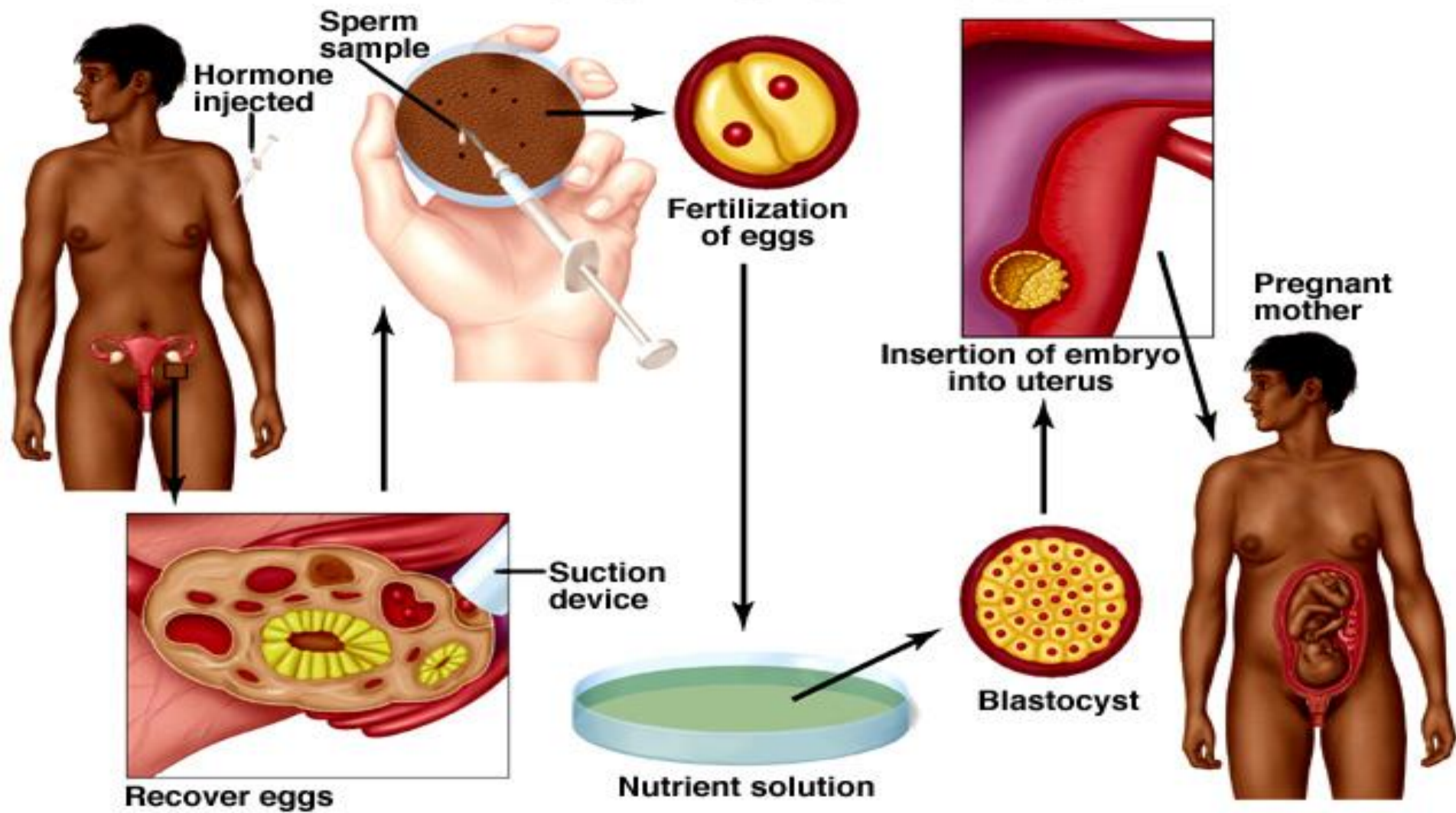
HAI (Husband artificail insemination)
insemination intracervical or intrauterine.



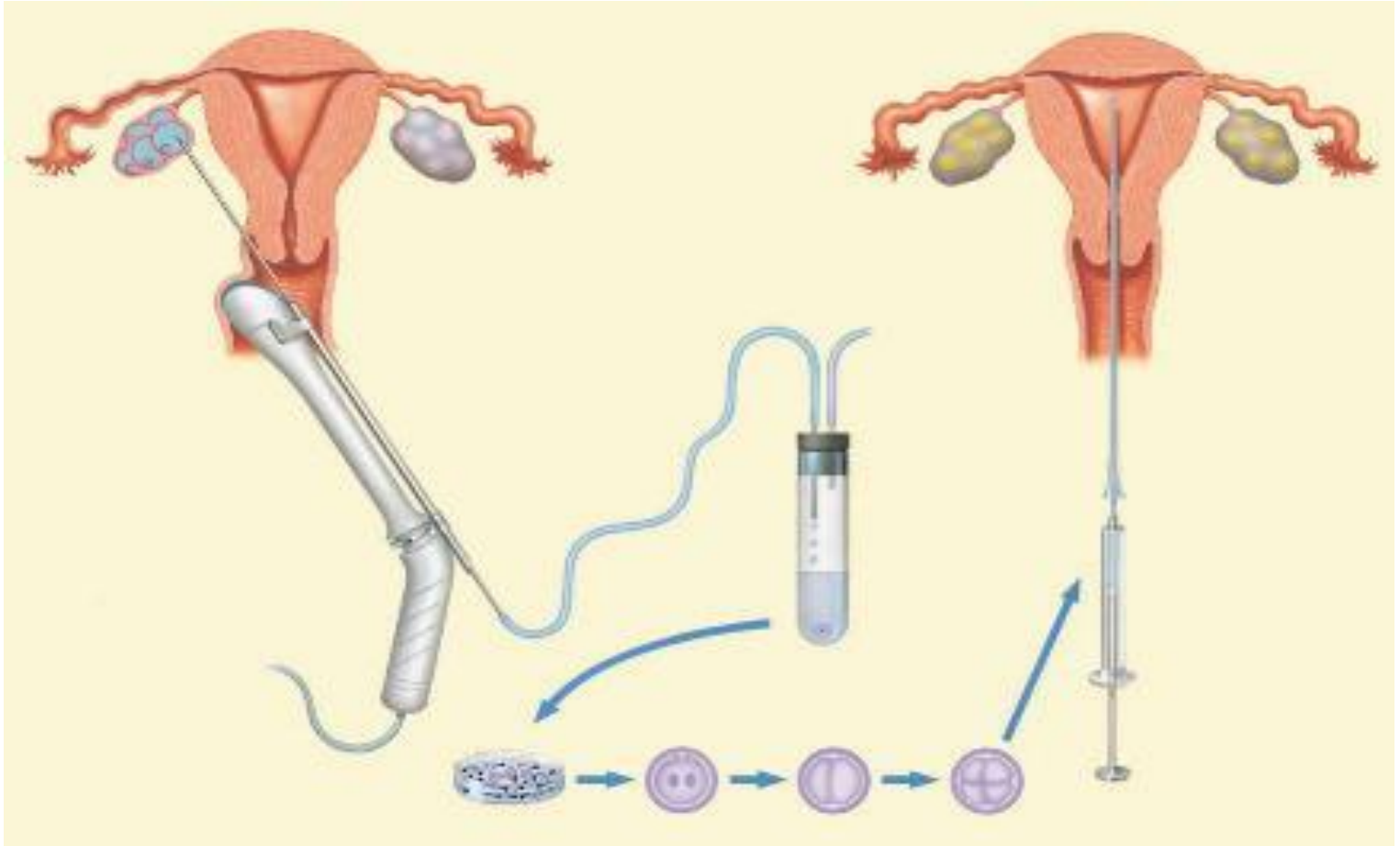


IVF

In Vitro Fertilization



Conventional IVF



between **50,000 and 200,000** motile sperm / egg



ICSI.

IVF VS ICSI

IVF

- **less fertilization rate**
- **Less pregnancy rate**
- **No chance for severe male factor infertility**

ICSI

- **High fertilization rate**
- **Higher pregnancy rate,**
- **Promising for severe male infertility**

SEMEN BANKING



NO “minimal criteria”
For cryopreservation
(even single
spermatozoa) .



How many
specimens should
be stored Sufficient
normal specimens to
provide **ten or more**
inseminations

SEMEN BANKING

Indications for Cryopreservation:

1. **Fertility Preservation (Cancer Diseases)**
2. **Infertility Treatment :**
 - A. Severe or progressive oligozoospermia.
 - B. Intermittent azoospermia.
 - C. TESE Samples : azoospermic men.
 - D. Patients with Anejaculation .
 - E. patients unable to provide fresh semen on the day of a therapeutic procedure.





ART

1. HAI (IUI). 5MIL SPERMS WITH
MOT.>50% FOR EACH OVUM

2. IVF. 100,000 SPERMS WITH MOT.>50%

3. ICSI. ONLY ONE MOT.SPERM FOR EACH OVUM.

Thank You



Normal Seminogram

Macroscopic examination

- *Volume :* 2ml or more
- *Odor :* semeniferous
- *Color:* grayish white
- *pH:* 7.2 or more
- *Liquefaction :* Within 60 minutes
- *VISCOSITY :* Viscous

Normal Seminogram

Microscopic examination

- *Count:* 20 mil/ml or more
- *Total count:* 40 miI or more/EJACULATE
- *Viability:* >75% by dye
- *Motility :* 50% or more motile (a+b)
or 25% or > of grade (a) within 60 min.
- *Abnormal forms :* < 70⁰/o
- *Pus cells :* < 1 mil/ml

Abnormal Finding

■ *Volume :*

- < 2ml Oligospermia
- > 6ml Polyspermia
- No ejaculate Aspermia

■ *Count:*

- <20 mil / ml Oligo**zo**ospermia
- >250 mil / ml Poly**zo**ospermia
- No sperms A**zo**ospermia

Abnormal Finding

- *Motility:*

< 25% (a) or <50% (a+b) Asthenospermia

- *Abnormal forms:*

> 70% Teratospermia

- *All sperms dead:*

Necrospermia

- *Pus cells:*

> 1 mil/ml Pyospermia